Maintain shape and proportions as increase in size

Bone Modeling

Long bones

Increase in length by ENDOCHONDRAL ossification at epiphyseal plate

Increase in diameter by INTRAMEMBRANOUS ossification in the periosteum

Conical region of bone must be trimmed from thick wide epiphysis to narrow shaft

*Cone growth upward

TOP
bone is being resorbed on outside
bone is laid down on inside
Rate is balanced, but diameter of shaft is smaller but of the same thickness

BOTTOM
Bone is added on outside
Bone is removed from inside
Bone diameter increase, thickness is the

Skull Bones

Flat bones and cranial cavity

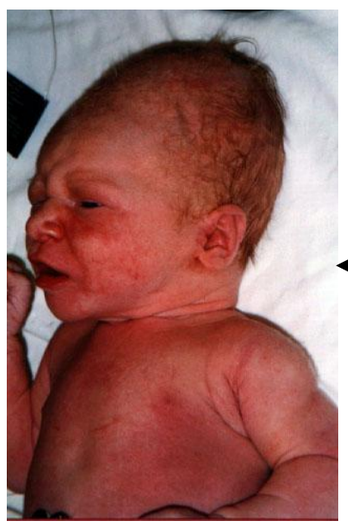
Rate is NOT equal, graded along entire length of bone

Bone tissue is added to ends of bones at suture lines

Bone ADDED on OUTER surface of inner and outer tableau of cortical bone

Bone REMOVED from INNER surface of inner and outer tableau

FYI: Softspot = fontanelle



So we don't look like this forever....

Curvature of cranial vault need to be decreased as brain enlarges

CENTRAL portion of bone near the midline moves the LEAST

LATERAL part of bone moves the MOST to change curvature

Bone is ADDED on the OUTSIDE of tableau

Bone is REMOVED from INSIDE of tableau

Bone ADDED to OUTSIDE of inner and outer tableau

Bone REMOVED from INSIDE of inner and outer tableau